

Cinnamon joins cholesterol battle

By Judy Foreman | August 24, 2004

The next drug in your medicine cabinet might come from the spice aisle of the grocery store.

Although research is still preliminary, doctors and researchers are getting excited about the diabetes and cholesterol-fighting potential of cinnamon.

Cinnamon probably "can't harm in small doses, it may help and it's not adding calories," said Melinda Maryniuk, a senior dietician at the Joslin Diabetes Center in Boston.

A small study completed last year on the possible health benefits of cinnamon was "very exciting and promising," according to Dr. Andrew Greenberg, director of the obesity metabolism laboratory at Tufts University, who is so intrigued he has begun studying it himself.

The 40-day study, of 60 people in Pakistan with Type 2 diabetes, found that one gram a day of cinnamon -- one-fourth of a teaspoon twice daily -- significantly lowered the subjects' blood sugar, triglycerides (fatty acids in the blood), LDL (or "bad") cholesterol, and total cholesterol.

Don't go bananas with this, of course. In high doses -- no one knows exactly how much -- cinnamon is believed to be toxic, according to Richard Anderson, a researcher at the Beltsville Human Nutrition Research Center in Maryland, part of the US Department of Agriculture, who conducted the study in Pakistan.

And don't substitute cinnamon for prescription medication whose benefits are well established.

"Cinnamon is a lot less effective than statins" at lowering cholesterol levels in the blood, according to Dr. Frank Sacks, a physician at Brigham and Women's Hospital and professor of nutrition at the Harvard School of Public Health. Statins have been tested in rigorous studies on 70,000 people for five years or more. Compared to that, he said, the research on cinnamon is weak.

"There are certainly substances in plants that have very strong biological effects, so the concept is fine," he said. And plant derivatives "are being intensively researched at many places -- that's a hot topic."

But it's also "a little weird," he said, that the USDA study found that the beneficial effects of cinnamon lasted for at least 20 days after people stopped taking it. "I don't know of any drug or product whose effects persist for 20 days."

For diabetics, cinnamon "does much the same thing as insulin" biochemically, said Don Graves, an adjunct professor of biochemistry at the University of California in Santa Barbara who has studied how cinnamon works in the body.

In Type 2 diabetes, the problem is that insulin no longer does a good job of escorting sugar into cells, said Anderson of the USDA. Cinnamon "makes cells more sensitive to the insulin that is available," he said.

An active ingredient in cinnamon, proanthocyanidin, worms its way inside cells, where it activates the insulin receptor. Once this receptor is activated, whether by insulin or cinnamon, chemical reactions occur allowing the cell to use energy from sugar.

A few other caveats are in order. If you have Type 2 diabetes, you should monitor your blood sugar carefully when adding cinnamon because the spice may intensify the effects of insulin medication -- or better yet, talk to your doctor first.

And don't use the good news about cinnamon to indulge regularly in calorie-laden cinnamon buns or muffins, warned Alice Lichtenstein, a professor at the Friedman School of Nutrition Science and Policy at Tufts University. Gaining weight would be worse for your health than not eating cinnamon, she said.

Finally, there may be an indirect health benefit to be had from cinnamon, according to Taiwanese scientists writing in the July 14 issue of *Agriculture and Food Chemistry*. Cinnamon oil, they found, kills mosquito larvae more effectively than DEET, a common pesticide and mosquito repellent. The next step is to test it against adult mosquitoes.